

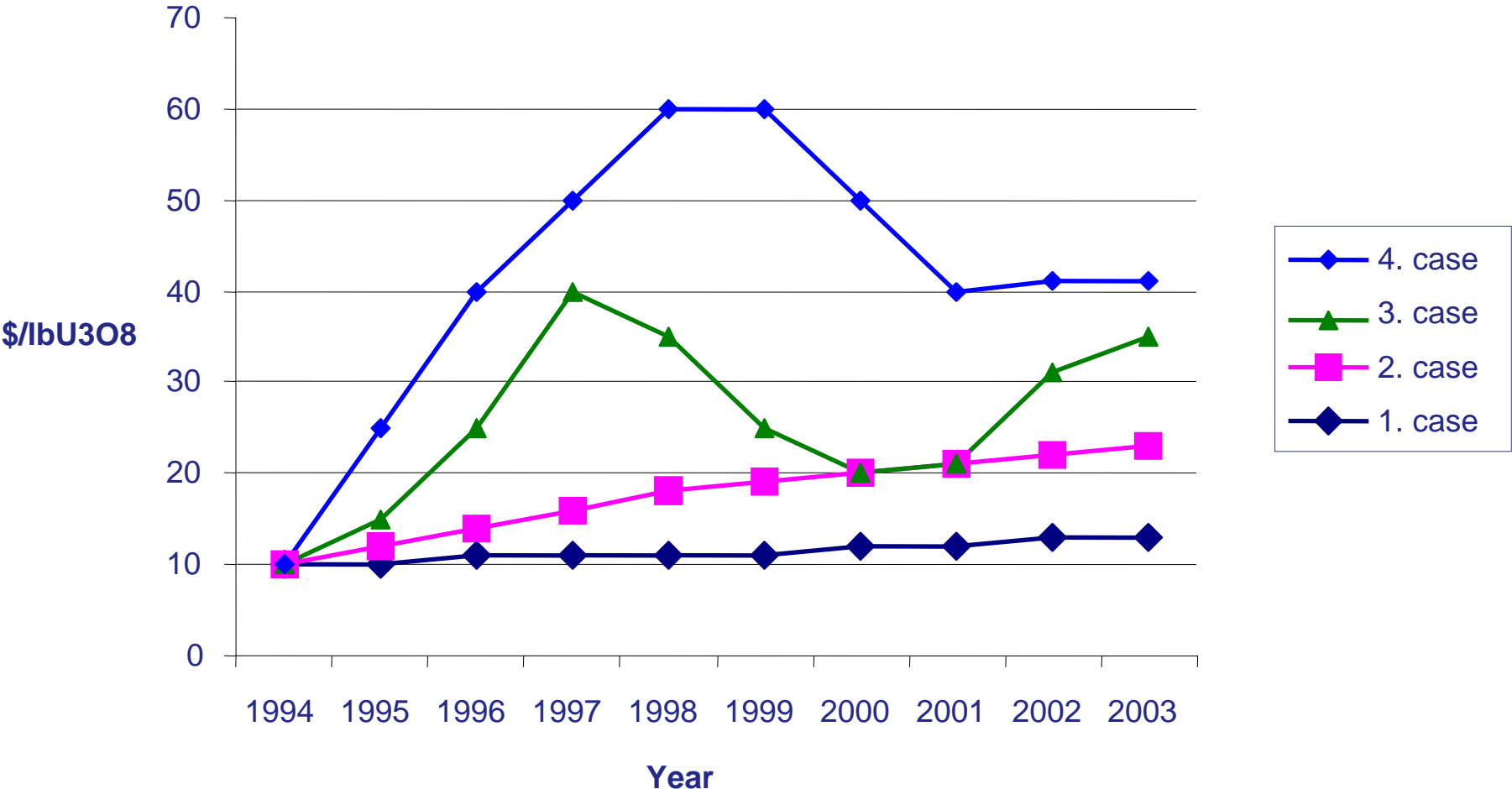


**World Nuclear Association, 31st Annual Symposium  
London, 8 September 2006**

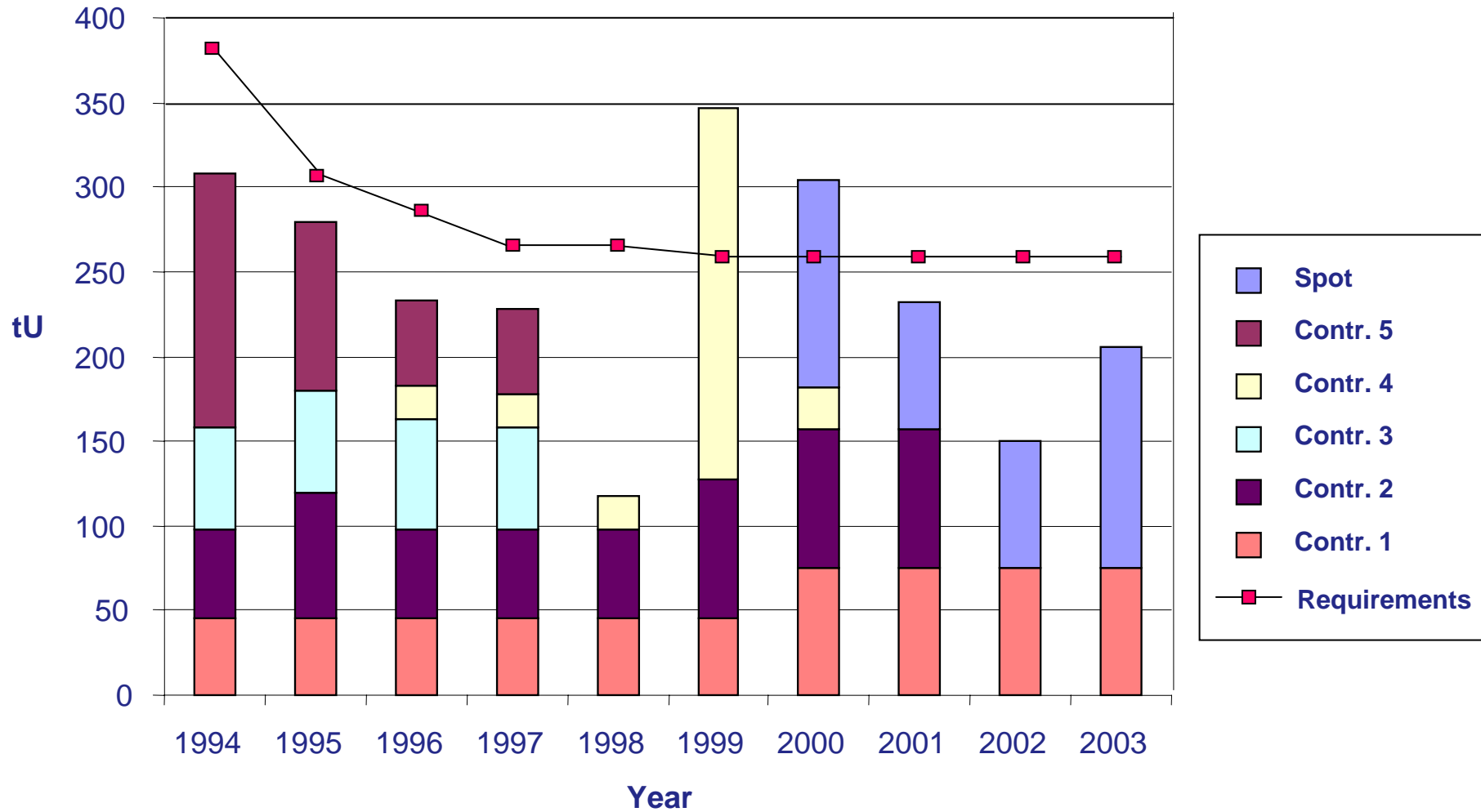
# **Optimal Uranium Purchase Strategy**

**Ilkka Mikkola  
Manager, Fuel Procurement  
Teollisuuden Voima Oy**

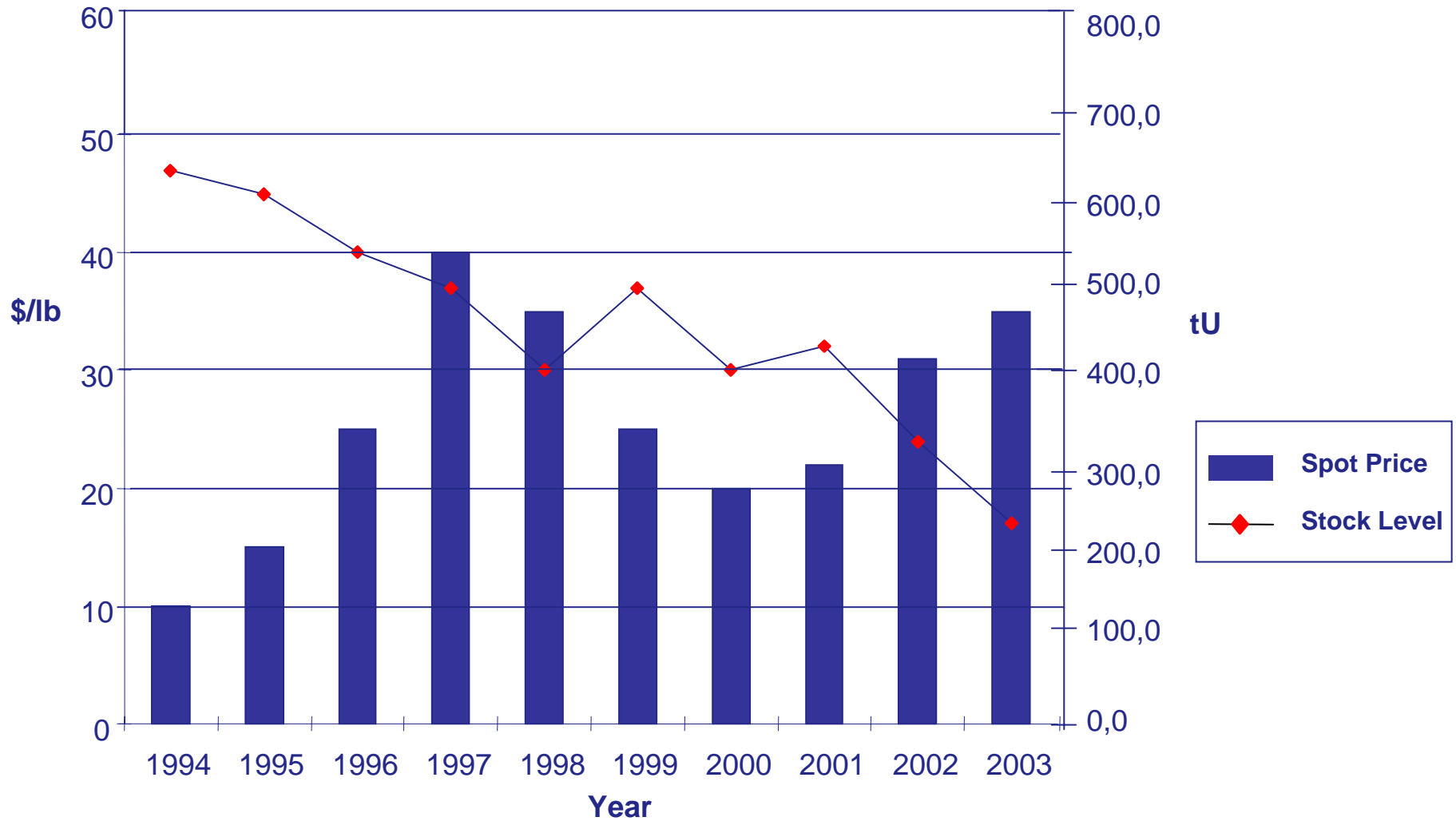
# Fig. 1 Uranium Price Scenarios, incl. inflation



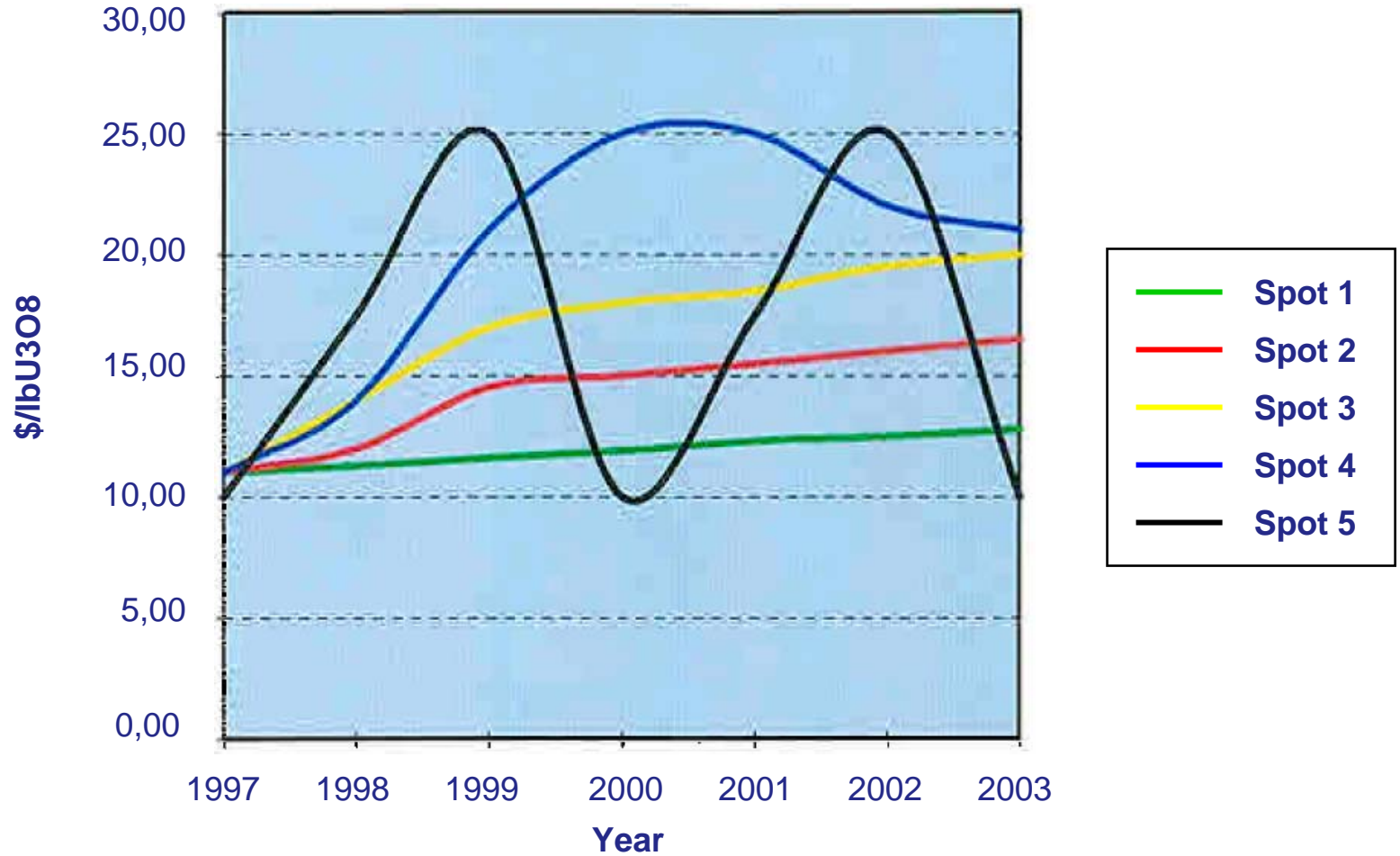
# Fig. 2 Uranium Requirements and Purchases (Price Case 3)



# Fig. 3 Spot Price and Stock Level Variations (Price Case 3)

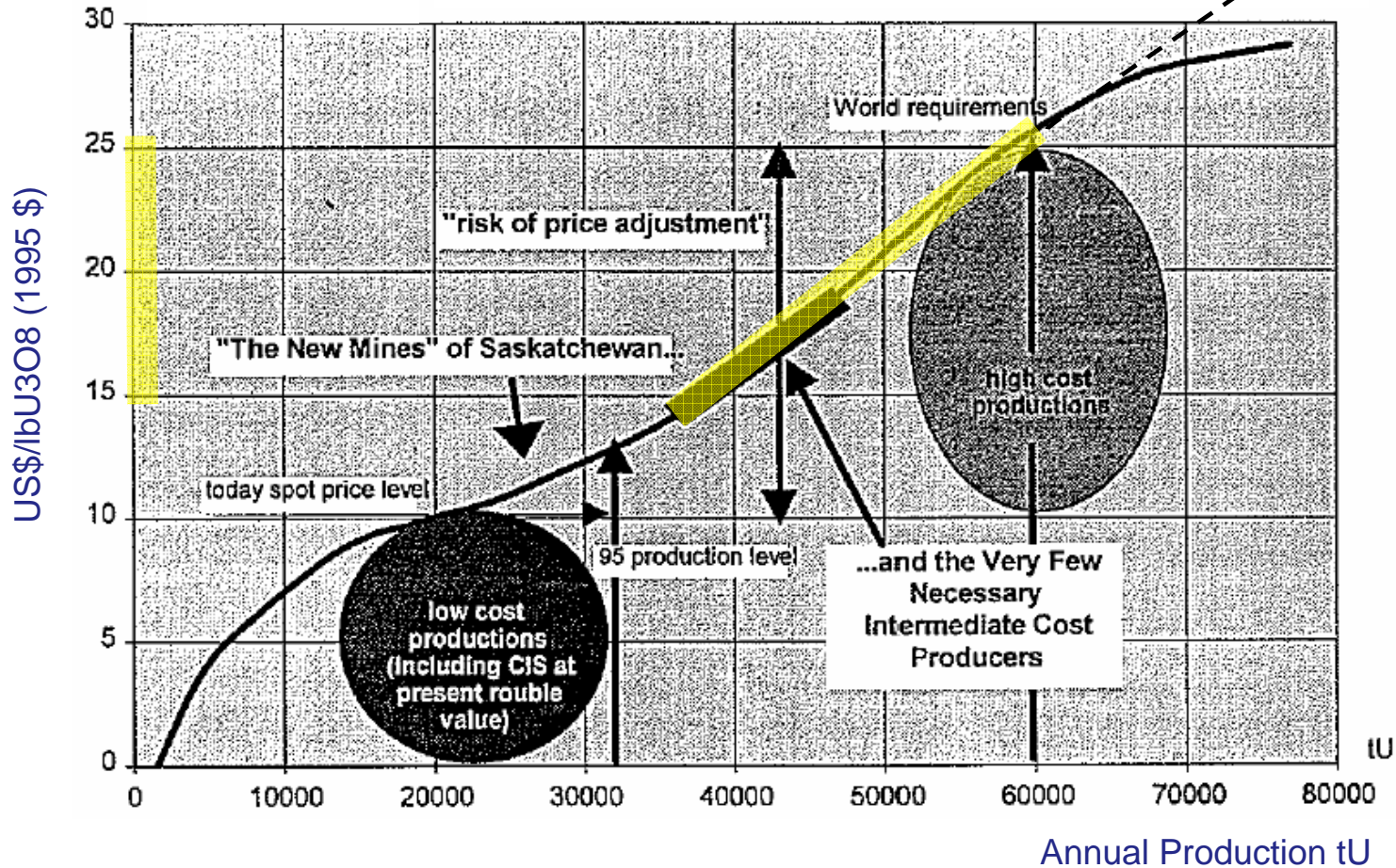


# Fig. 4 a Spot Price Scenarios in 1997



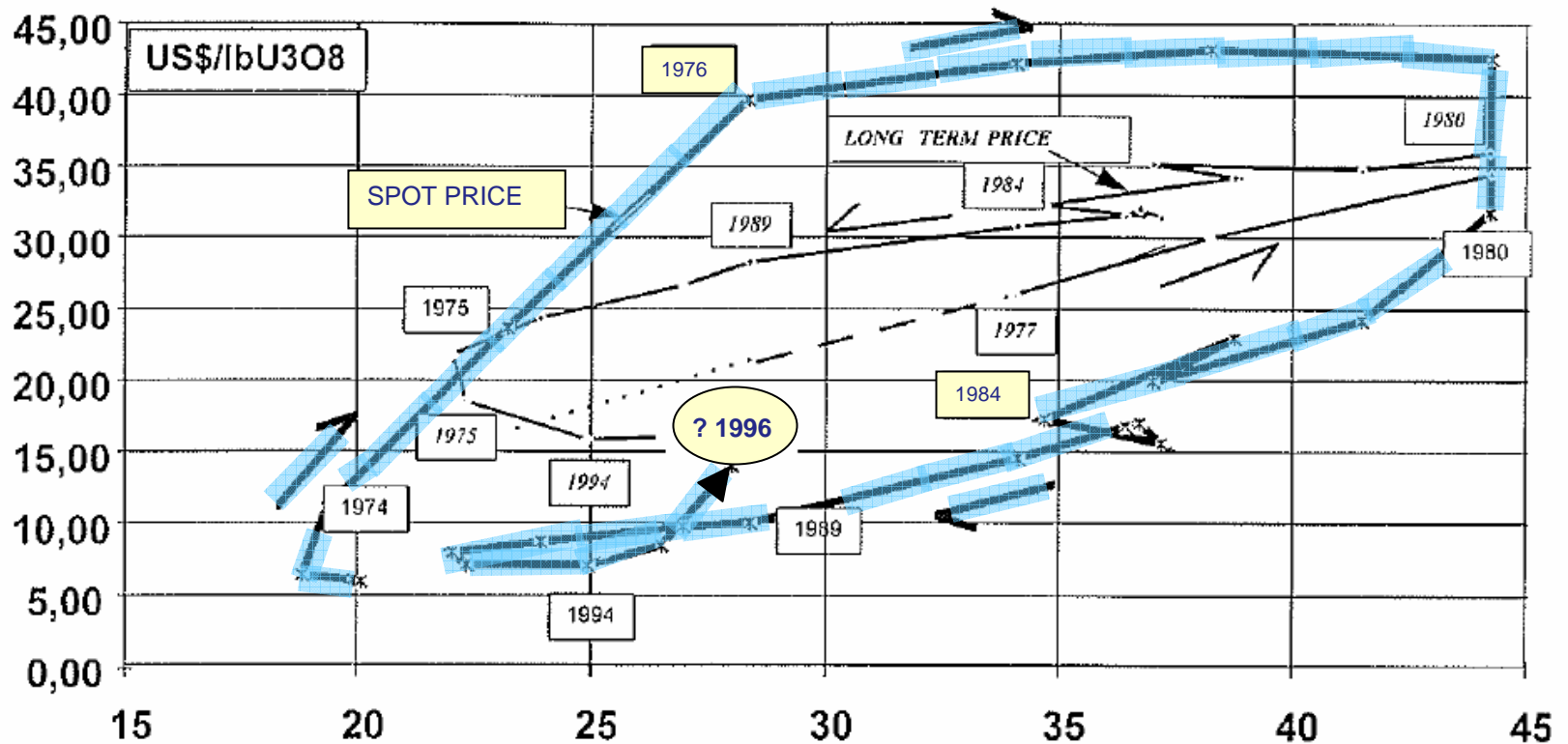
# Fig 4 b Late 90's Supply Curve for Uranium (adapted from TradeTech 1995)

Tom Pool 3/96



Source: Durrett, Cogema,  
Williamsburg 1995

# Fig 4 c WOCA NatU Production (ktU)



Historical uranium prices (year n) plotted against WOCA (Western World) uranium production (year n+1), for 1971 to 1995 (prices in current US dollars). Two lines are plotted: spot prices, and long term prices (weighted average of deliveries under long term contracts).

Source: Capus & Caumartin,  
Cogema (AREVA NC),  
London 1996

# Fig. 5 Uranium Purchase Model 1969-2004

Present value, sum: \$4 702 613 378

One purchase per year

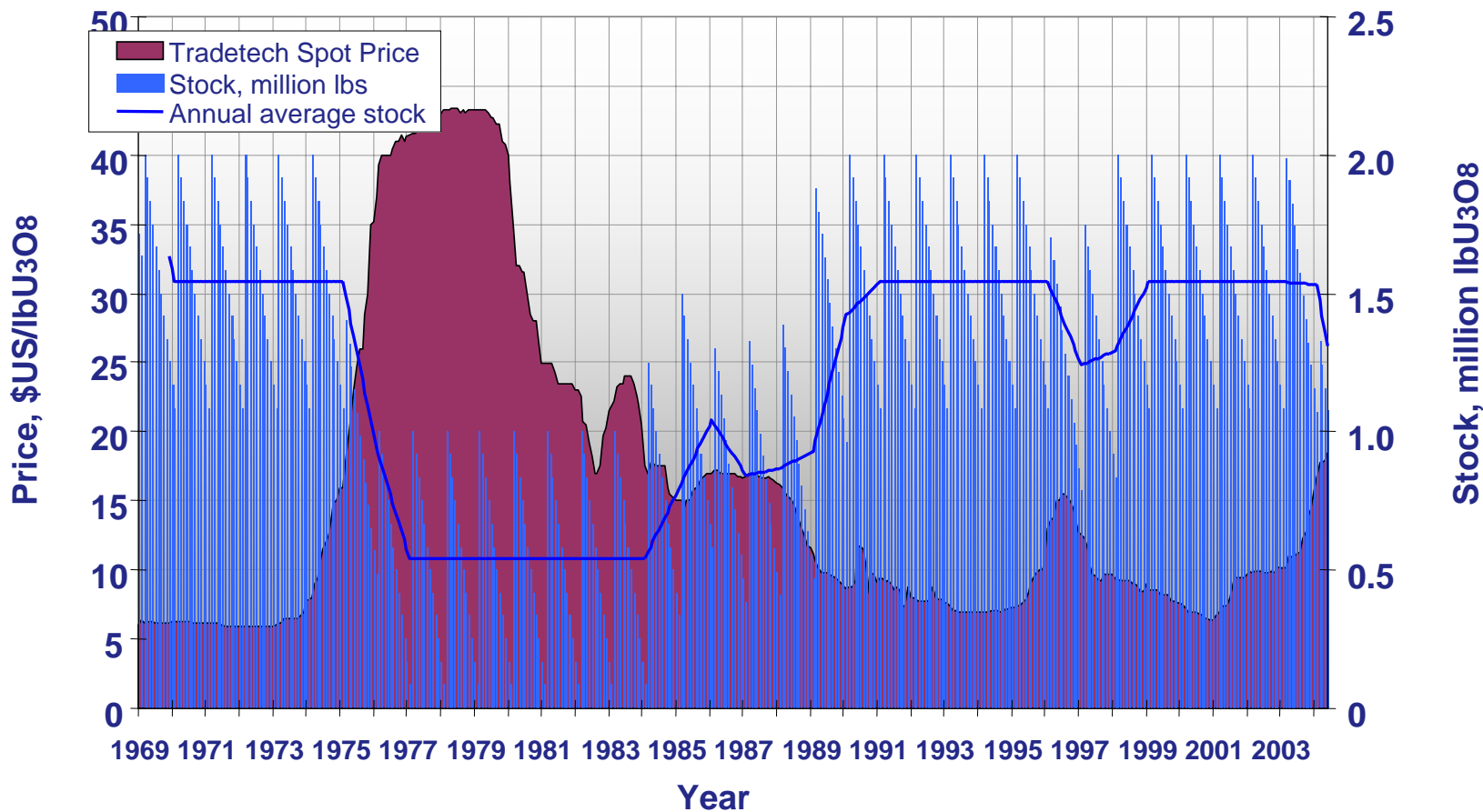
Discount rate: 10%

Stock target: 2 years

At price: \$10

Stock target: 1 year

At price: \$20



# Fig. 6 Uranium Purchase Model, Annual Needs = 1 million lbs

Present value, sum: \$3 611 579 949  
One purchase per year  
Discount rate: 10%

Stock target: 6 years  
At price: \$10

Stock target: 1 year  
At price: \$20

